Amendments to the Specification:

Please replace the paragraph beginning at page 1, line 6, with the following rewritten paragraph:

~~--Positioning of, e.g., mobile stations making use of inherent information such as received transmission power level is previously known.~~ The positioning of mobile stations which make use of inherent information such as received transmission power is previously known. It is also ~~considered~~ known in prior art to make use of such information from different base stations receiving signals transmitted from ~~the example~~ a mobile station for increasing the accuracy of the ~~positioning, e.g.~~ positioning of the mobile station by means of triangulation.--

Please replace the paragraph beginning at page 1, line 21, with the following rewritten paragraph:

--Cell Global Identity with Timing Advance is operable with GSM. It makes use of a Cell Global Identity broadcast from each base station. The Cell Global Identity consequently identifies the base station with which the mobile station is communicating[[,]] or the cell on which the mobile station is camping. The distance from the base station is determined by means of a system inherent Timing Advance parameter, which ~~compensating~~ compensates for propagation delay time between a base station and a mobile station. Conclusively, with Cell Global Identity with Timing Advance, the mobile station can be determined to be within a ring-shaped or arc-shaped area within a cell or cell sector, depending on the radiation pattern. FIG. 1 illustrates positioning with timing advance for a 120° sector cell with a base station <<Site>> located ~~to~~ within a cell <<Cell/Sector>> corner. A mobile station <<MS>> is located ~~to~~ within a TA band <<TA BAND>> of width equal to the inaccuracy of the timing advance. However, the method does not reveal where within this band the mobile station is located unless more base stations are involved in positioning. ~~I.e.~~ Specifically, the mobile station <<MS>> could be anywhere in the shaded area <<TA BAND>> with the same outcome when trying to position it. In ~~UMTS~~ UMTS, a feature corresponding

to Cell Global Identity with Timing Advance is named Cell Identity with Round Trip Time.--

Please replace the paragraph beginning at page 2, line 16, with the following rewritten paragraph:

--Assisted GPS is a satellite positioning system for assisting both GSM and UMTS, as well as optionally other terrestrial radio systems, but requires a GPS (Global Positioning System) receiver and additional signaling and is not compatible with old GSM terminals. A basic assisted GPS system is illustrated in figure 2. GPS position information is received from three satellites, <<SAT1>>, <<SAT2>>, and <<SAT3>>. To reduce time to a first fix, GPS positioning is assisted by ~~coarse~~ course terrestrial positioning communicated from the base station <<Site>>. Basically, there are two modes of assisted operation, mobile assisted and mobile based. In the former mode, the mobile station determines pseudoranges to the satellites <<SAT1>>, <<SAT2>>, and <<SAT3>> in view as determined from the ~~coarse~~ course positioning. The pseudoranges are transferred to the terrestrial network, in which the mobile station position is calculated. In the latter mode of assisted operation, the mobile station determines its position from available data obtained from the base station <<Site>>.--

Please replace the paragraph beginning at page 3, line 1, with the following rewritten paragraph:

--U.S. Pat. No. US6,321,083 discloses a method and arrangement for locating a telephone traffic hot spot of a cell. ~~Timing~~ The timing advance ~~informs of~~ provides a mobile station distance from a base station with which it is connected. Direction to the mobile station is determined by means of signal strength from two or more adjacent cells.--

Please replace the paragraph beginning at page 3, line 10, with the following rewritten paragraph:

--None of the cited documents above discloses using co-sited neighbor assisted positioning for determining a distance between a mobile station and a base station by means of timing advance and by determining a mobile station bearing from a received signal level and signal level received in a co-sited neighbor cell/sector, where preferably the signal levels are averaged levels.--

Please replace the paragraph beginning at page 3, line 18, with the following rewritten paragraph:

--With greater precision, there is less ambiguity and services can be focused. Positioning is particularly requested for emergency calls, but for investments to pay off there will most certainly also be other positioning applications. Cell Global Identity with Timing Advance is considered to be too imprecise to attract operators to most ~~such~~ prior art applications.--

Please replace the paragraph beginning at page 3, line 25, with the following rewritten paragraph:

--~~Time~~ The time required for determining mobile station position should be as short as possible. Extensive signaling would drain batteries and load both radio interface[[,]] between a mobile station, ~~and~~ base station, and a radio access network/core network. Further, to attract operators, the method should be applicable to existing mobile stations.--

Please replace the paragraph beginning at page 4, line 1, with the following rewritten paragraph:

--There is a problem in existing terrestrial positioning methods utilizing propagation time delay, such as E-OTD (Enhanced Observed Time Difference) or O-TDOA (Observed Time Difference of Arrival), requiring communication involving more than one site ~~for~~, e.g., triangulation, as this among other things involves increased signaling for exchange of timing information for determining propagation time delay. Neighboring base stations may also be under control of different base station

controllers[[,]] ~~BSCs~~ (BSCs) or radio network controllers~~, RNCs~~ (RNCs). Extensive signaling also delays positioning. Upgrading of existing mobile stations may also be required.--

Please replace the paragraph beginning at page 4, line 13, with the following rewritten paragraph:

--A problem of terrestrial positioning methods utilizing received signal levels, requiring communication involving more than one site ~~for~~, e.g., triangulation, is ~~the small correlation of propagation path losses between different sites, rendering the distance estimates less reliable~~ that the propagation of path losses between different sites is small, which renders the distance estimates less reliable.--

Please replace the paragraph beginning at page 2, line 16, with the following rewritten paragraph:

--The ratio of respective received power in a neighboring cell/sector <<N1>> ~~and~~ over a serving cell/sector <<N1>> determines where on the TA band <<TA Band>> a mobile station is located. For a given TA band, the greater the ratio the closer to the cell/sector border between the serving cell/sector <<S>> and the neighboring cell/sector <<N1>> is the mobile station. A second ratio can be determined for an additional co-sited neighboring cell <<N2>>to be combined with the initially determined ratio to increase accuracy. If there are more than three sectors of the site, corresponding ratios can be determined also for additional number of co-sited neighbors to be included.--

Please replace the paragraph beginning at page 7, line 4, with the following rewritten paragraph:

--In a preferred mode of the invention, for a Mobile Station to be positioned, received signal levels from the base transceiver system <<BTS>> are averaged in a locating function of base station controller <<BSC>>. The signal levels delivered to SMLC thereby become less noisy and more stable. Further, excessive transmissions in the ~~fixed~~ network are avoided by averaging early in the transmission chain from BTS to

SMLC. ~~In, e.g.,~~ For example, in GSM the earliest feasible occurrence of averaging with sufficient processing capacity is the base station controller. A further advantage is that the Abis interface is only marginally additionally loaded as compared to a system not providing for the invention ~~as~~ with signal levels[[,]] not being averaged, are made available in the BSC according to prior art specifications. Preferably the average levels are determined in a locating function of the BSC. In addition to prior art systems, the base transceiver station <<BTS>> transmits two signaling levels, one of the served cell and one of the neighbor, ~~in place~~ instead of ~~only~~ one. Optionally, signaling levels of more than one neighbor cell signaling level (and consequently more than two signaling levels) are transmitted. If signaling levels of both neighbors are included, a bearing can be determined from a radio/difference of the individual ratios/differences or directly from a ratio/difference of neighbor signal levels. The base station includes the received signal level of the served cell/sector and at least one co-sited neighboring cell/sector. Preferably, the cell or cells to be included are selected from those signal levels of co-sited cell or cells ~~highest~~ ranked highest in the locating function. No averaging in SMLC would be required. Further, a requirement on averaging in SMLC would violate present GSM-standardization.--

Please replace the paragraph beginning at page 8, line 3, with the following rewritten paragraph:

--In one realization of the invention, signal levels from a mobile station of up to 32 neighbor cells/sectors can be averaged.--

Please replace the paragraph beginning at page 8, line 6, with the following rewritten paragraph:

--For example, when ~~When~~ the invention is applied to ~~e.g.~~ GSM, the averaged level is preferably included in a BSSLAP TA Response to SMLC in response to a BSSLAP TA Request. ~~Thereby, signaling~~ Thus, signaling load in the Lb, or corresponding, interface would be reduced, ~~and there would be less~~ which would reduce noise in the resulting position estimate.--